

#3 RECEIVED

AUG 1 5 2001

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/489,850

DATE: 08/08/2001TECH CENTER 1600/2900

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Input Set : N:\Crf3\RULE60\09489850.txt
Output Set: N:\CRF3\08082001\1489850.raw

SEQUENCE LISTING

```
4 (1) GENERAL INFORMATION:
             (i) APPLICANT: VAN ALSTYNE, Diane
      6
      7
                             SHARMA, Lawrence Rajendra
      9
            (ii) TITLE OF INVENTION: PEPTIDES REPRESENTING EPITOPIC SITES FOR
     10
                                      BACTERIAL AND VIRAL MENINGITIS CAUSING AGENTS AND THEIR
                                      CNS CARRIER, ANTIBODIES THERETO, AND USES THEREOF
     11
     13
           (iii) NUMBER OF SEQUENCES: 75
     15
            (iv) CORRESPONDENCE ADDRESS:
                   (A) ADDRESSEE: Foley & Lardner
     16
                   (B) STREET: 3000 K Street, N.W., Suite 500
     17
     18
                   (C) CITY: Washington
     19
                   (D) STATE: D.C.
                                                                 ENTERED
     20
                   (E) COUNTRY: USA
                  (F) ZIP: 20007-5109
     21
             (V) COMPUTER READABLE FORM:
     23
     24
                   (A) MEDIUM TYPE: Floppy disk
     25
                   (B) COMPUTER: IBM PC compatible
                   (C) OPERATING SYSTEM: PC-DOS/MS-DOS
     26
                   (D) SOFTWARE: PatentIn Release #1.0, Version #1.30
     27
     29
            (vi) CURRENT APPLICATION DATA:
C-->30
                   (A) APPLICATION NUMBER: US/09/489,850
                  (B) FILING DATE: 24-Jan-2000
C--> 31
     32
                   (C) CLASSIFICATION:
     34
           (vii) PRIOR APPLICATION DATA:
     35
                   (A) APPLICATION NUMBER: 08/988,444
     36
                   (B) FILING DATE:
     38
                   (A) APPLICATION NUMBER: US 08/127,499
     39
                   (B) FILING DATE: 28-SEP-1993
     41
          (viii) ATTORNEY/AGENT INFORMATION:
     42
                   (A) NAME: BENT, Stephen A.
     43
                   (B) REGISTRATION NUMBER: 29,768
     44
                   (C) REFERENCE/DOCKET NUMBER: 51916/103/INBI
     46
            (ix) TELECOMMUNICATION INFORMATION:
     47
                   (A) TELEPHONE: (202)672-5300
                  (B) TELEFAX: (202)672-5399
                  (C) TELEX: 904136
     52 (2) INFORMATION FOR SEQ ID NO: 1:
             (i) SEQUENCE CHARACTERISTICS:
     54
     55
                  (A) LENGTH: 992 amino acids
     56
                  (B) TYPE: amino acid
     57
                  (C) STRANDEDNESS:
     58
                  (D) TOPOLOGY: unknown
            (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
     64
     66
             Met Ala Ser Thr Thr Pro Ile Thr Met Glu Asp Leu Gln Lys Ala Leu
     67
                                                  10
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Glu Ala Gln Ser Arg Ala Leu Arg Ala Gly Leu Ala Ala Gly Ala Ser

69

RAW SEQUENCE LISTING DATE: 08/08/2001 PATENT APPLICATION: US/09/489,850 TIME: 16:14:04

70				20					25					30		
72	Gln	Ser	Arg		Pro	Arq	Pro	Pro		His	Ala	Arq	Leu	-	His	Leu
73			35	. ,		,		40				,	45			
75	Pro	Glu	Met	Thr	Pro	Ala	Val	Thr	Pro	Glu	Gly	Pro	Ala	Pro	Pro	Arg
76		50					55				•	60				_
78	Thr	Gly	Ala	Trp	Gln	Arg	Lys	Asp	Trp	Ser	Arg	Ala	Pro	Pro	Pro	Pro
79	65	-		-		70	-	-	-		75					80
81	Glu	Glu	Arg	Gln	Glu	Ser	Arg	Ser	Gln	Thr	Pro	Ala	Pro	Lys	Pro	Ser
82			-		85		-			90				_	95	
84	Arg	Ala	Pro	Pro	Gln	Gln	Pro	Gln	Pro	Pro	Arg	Met	Gln	Thr	Gly	Arg
85				100					105					110		
87	Gly	Gly	Ser	Ala	Pro	Arg	Pro	Glu	Leu	Gly	Pro	Pro	Thr	Asn	Pro	Phe
88	-	_	115			_		120		_			125			
90	Gln	Ala	Ala	Val	Ala	Arg	Gly	Leu	Arg	Pro	Pro	Leu	His	Asp	Pro	Asp
91		130				_	135		_			140		_		_
93	Thr	Glu	Ala	Pro	Thr	Glu	Ala	Cys	Val	Thr	Ser	Trp	Leu	Trp	Ser	Glu
94	145					150					155					160
96	Gly	Glu	Gly	Ala	Val	Phe	Tyr	Arg	Val	Asp	Leu	His	Phe	Ile	Asn	Leu
97					165					170					175	
99	Gly	Thr	Pro	Pro	Leu	Asp	Glu	Asp	Gly	Arg	Trp	Asp	Pro	Ala	Leu	Met
100				180)				185	5				190)	
102	Tyr	: Asr	Pro	Суз	Gly	Pro	Glu	ı Pro	Pro) Ala	a His	val	. Val	Arg	j Ala	ı Tyr
103			195					200)				205	i		
105	Asr	ı Glr	Pro	Ala	Gly	Asp	Val	Arg	g Gly	y Val	LTrp	Gly	Lys	Gly	/ Glu	ı Arg
106		210)				215	5				220)			
108	Thr	Tyr	Ala	Glu	ı Glr	Asp	Phe	arg	y Val	L Gly	, Gly	Thr	Arg	Trp	His	Arg
109	225	5				230)				235	5				240
111	Leu	ı Leu	ı Arg	Met	Pro	val	. Arg	g Gly	Let	ı Asp	Gly	Asp	Thr	Ala	Pro	Leu
112					245					250					255	
114	Pro	Pro) His	Thr	Thr	Glu	Arg	, Ile			: Arg	ser (Ala	Arg	, His	Pro
115				260					265					270		•
117	Trp	Arg		-	Phe	Gly	Ala			ı Ala	i Phe	Leu		_	Leu	Leu
118			275					280				_	285			
120	Leu			Val	. Ala	Val	_		Ala	ı Arg	, Ala			Glr	Pro	Arg
121		290				_	295		_			300				
123		_	Met	Ala	Ala) Met	. Pro	Pro			Pro	Arg	Ala	His
124	305					310					315					320
126	GLy	Gln	His	Tyr	_		His	His	His			Pro	Phe	Leu	_	His
127	_	- 3	•	•	325			_	_	330			•		335	
129	Asp	GIY	His		_	GTĀ	Thr	Leu			. GIY	GIn	Hls			Asn
130		~	_	340		_		•	345		1	- 1	1	350		_
132	Ala	ser			Leu	Pro	GIY			Let	ı GIn	GLY) GIY	Cys
133			355				***	360		- m1		1	365			-
135	туг			ser	Asp	Trp			і СІУ	Thi	HIS		-	HIS	Thi	Lys
136	TT -	370		nh -	m		375		. 17-2 -		7	380		D	. n 1 -	m b
138			. ASP	ьче	ттр			. GIU	HIS	ASP	_		PIO	PIC	н н та	Thr
139 141	385			T 0	արհ⊸	390		- 1 ת	. A ~ ~	. m	395 		7 T ~	. ד ג	ጥኤ~	400
141	PIO	1.111	ser	ьeu			АТĞ	MIG	ASI	-		HIG	HIG	HIG		Pro
147					405					410	,				415	'

 RAW SEQUENCE LISTING
 DATE: 08/08/2001

 PATENT APPLICATION: US/09/489,850
 TIME: 16:14:04

144	Ala	Thr	Ala		Pro	Pro	Cys	His			Leu	Asn	Asp		Cys	Gly
145			_	420		_		_	425		_	_		430	_	
147	GLY	Phe		Ser	GLY	Cys	Gly		Met	Arg	Leu	Pro		Ala	Leu	Thŗ
148	_		435			_	_	440		-		•	445	_	-	_
150	Pro	_	Ala	Val	GLY	Asp	Leu	Arg	Ala	Val			Arg	Pro	Val	Pro
151		450			_	_	455					460				
153		Tyr	Pro	Val	Cys		Ala	Met	Arg	Trp	_	Leu	Pro	Pro	Trp	
154	465	_	_		_	470					475		_			480
156	Leu	Val	Ile	Leu		Ala	Arg	Pro	Glu		GLY	Trp	Thr	Cys	- T	Gly
157	_	•	_		485		_			490	_		_	•	495	
159	Val	Pro	Ala		Pro	GIY	Thr	Arg	-	Pro	Glu	Leu	Val		Pro	Met
160		_		500	_	_	_		505		_	_		510		
162	Gly	Arg		Thr	Cys	Ser	Pro		Ser	Ala	Leu	Trp		Ala	Thr	Ala
163	_		515	_	_	_		520	_	_	_		525	_		
165	Asn		Leu	Ser	Leu	Asp	His	Ala	Phe	Ala	Ala		Val	Leu	Leu	Val
166	_	530		_			535	•				540	_			_
168		Trp	Val	Leu	Ile		Met	Val	Cys	Arg	-	Ala	Cys	Arg	Arg	
169	545					550					555					560
171	Ala	Pro	Pro	Pro		Ser	Pro	Gln	Ser		Cys	Arg	Gly	Thr		Pro
172			_		565				_	570			_	_	575	_
174	Pro	Ala	Tyr	_	Glu	Glu	Ala	Phe		Tyr	Leu	Cys	Thr		Pro	GLY
175	_			580			_		585			_		590		_
177	Cys	Ala		Gln	Thr	Pro	Val		Val	Arg	Leu	Ala	_	Val	Gly	Phe
178			595	_	_		_	600		_	_		605			_
180	Glu		Lys	Ile	Val	Asp	Gly	Gly	Cys	Phe	Ala		Trp	Asp	Leu	Glu
181	_	610	_	_		_	615	_	_		_	620				_
183		Thr	GLY.	Ala	Cys		Cys	Glu	Ile	Pro		Asp	Val	Ser	Cys	
184	625	_				630	_				635	_		_		640
186	GLy	Leu	Gly	Ala	_	Val	Pro	Thr	Ala		Cys	Ala	Arg	Ile		Asn
187		_,			645	_			_	650		_		_	655	_
189	GLY	Thr	GIn	_	Ala	Cys	Thr	Phe	_	Ala	Val	Asn	Ala	_	Ser	Ser
190	- 3	-3	_	660		_		_	665		_	_		670	_	_
192	GLY	GLY	_	Ala	GIn	Leu	Ala		Tyr	Phe	Asn	Pro	_	GTA	Ser	Tyr
193	~	_	675	_	•	_	~-1	680	_	~ 1			685		_1	_,
195	Tyr	_	GIn	Tyr	Hls	Pro	Thr	Ala	Cys	GLu	Val		Pro	Ата	Phe	GIY
196	•	690				~	695	~ 1	-1	_	_,	700				_
198		Ser	Asp	Ala	Ala		Trp	GTĀ	Phe	Pro		Asp	Thr	Val	Met	
199	705	_,	_ ,	_		7.10		1	_,		715		_			720
201	vaı	Pne	Ala	Leu		Ser	Tyr	Val	GIn			His	Lys	Thr		Arg
202	1	_		•	725		_,	_		730			_	_	735	
204	vaı	ьys	Pne		Thr	GLU	Thr	Arg		vaı	Trp	GIn	Leu		val	Ата
205	-1		~	740	_		-1	1	745	•	_	-1	_	750	1	_
207	GTÄ	vaı		Cys	Asn	vaı	Thr		Glu	HIS	Pro	Phe	_	Asn	Thr	Pro
208	TT 2 .	01 -	755	_	a 1.	**- 7	a 2	760	-			_	765			
210	HlS		GIn	Leu	GIu	val	Gln	val	Pro	Pro	Asp		GLY	Asp	Leu	val
211	a 1	770	~ 1				775		_	- 7	- 1	780	_	_	a 1	_
213		ľyr	шe	Met	Asn	_	Thr	GTA	Asn	GIn		Ser	Arg	Trp	GTA	
214	785	.	_	_	_	790		_	_	_	795	_	_		_	800
216	GLY	ser	Pro	Asn	Cys	His	Gly	Pro	Asp	Trp	Ala	Ser	Pro	val-	Cys	GIn

RAW SEQUENCE LISTING DATE: 08/08/2001 PATENT APPLICATION: US/09/489,850 TIME: 16:14:04

217						805					810					815	
219		Arg	His	Ser	Pro	Asp	Cys	Ser	Arg	Leu	Val	Gly	Ala	Thr	Pro	Glu	Arg
220		_			820	_	_		_	825		-			830		•
222		Pro	Arg	Leu	Arg	Leu	Val	Asp	Ala	Asp	Asp	Pro	Leu	Leu	Arg	Thr	Ala
223				835	_			_	840	_	_			845	_		
225		Pro	Gly	Pro	Gly	Glu	Val	Trp	Val	Thr	Pro	Val	Ile	Gly	Ser	Gln	Ala
226			850					855					860				
228		Arg	Lys	Cys	Gly	Leu	His	Ile	Arg	Ala	Gly	Pro	Tyr	Gly	His	Ala	Thr
229		865					870					875					880
231		Val	Glu	Met	Pro	Glu	Trp	Ile	His	Ala	His	Thr	Thr	Ser	Asp	${\tt Pro}$	\mathtt{Trp}
232						885					890					895	
234		His	Pro	Pro	Gly	Pro	Leu	Gly	Leu	Lys	Phe	Lys	Thr	Val	Arg	${\tt Pro}$	Val
235					900					905					910		
237		Ala	Leu	Pro	Arg	Ala	Leu	Ala	Pro	Pro	Arg	Asn	Val	Arg	Val	Thr	Gly
238				915					920					925			
240		Cys		Gln	Cys	Gly	Thr		Ala	Leu	Val	Glu	Gly	Leu	Ala	Pro	Gly
241			930					935					940				
243		_	Gly	Asn	Cys	His		Thr	Val	Asn	Gly		Asp	Val	Gly	Ala	Phe
244		945		_			950	_				955					960
246		Pro	Pro	Gly	Lys		Val	Thr	Ala	Ala		Leu	Asn	Thr	Pro		Pro
247		_			_	965			_		970		_		_	975	
249		Tyr	Gln	Val		Cys	Gly	Gly	Glu		Asp	Arg	Ala	Ser		Gly	His
250		*			980					985					990		
	253 (2) INFORMATION FOR SEQ ID NO: 2: 255 (i) SEQUENCE CHARACTERISTICS:																
255		(1)															
256	· ·																
	257 (B) TYPE: amino acid 258 (C) STRANDEDNESS:																
258 259																	
265		(xi)			OLOC				70 TE	NO.	٠,						
267												Dro	Pro	λνα	Mot	Cln	Thr
268		1	Ser	ni 9	πIα	5	110	GIII	GIII	FIO	10	FIO	FIO	лгу	Mec	15	1111
270		_	Arσ	Glv	Gly	_					10					13	
271		011	**** 9	OI I	20	DCI											
	(2)	INFOR	RMATI	ON F		EO I	D NO): 3:									
275	\ - /							TICS									
276		()						aci									
277					E: a				_								
278			_		RANDE												
279					OLOG			wn									
285		(xi)							Q ID	NO:	3:						
287		Gln															
288		1				5											
290	(2)	INFOR	ITAM	ON F	OR S	EQ I	D NC	: 4:									
292		(i)	SEQU	ENCE	CHA	RACI	ERIS	TICS	; :								
293								o ac	ids								
294					E: a			.d									
295					ANDE												
296			(D)	TOP	OLOG	Y: u	nknc	nw									

PATENT APPLICATION: US/09/489,850 DATE: 08/08/2001 TIME: 16:14:04

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302
        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
304
         Glu Arg Gln Glu Ser Arg Ser Gln Thr Pro Ala Pro Lys Pro Ser Arg
305
                                               10
         Ala Pro Pro Gln Gln
307
308
                      20
310 (2) INFORMATION FOR SEQ ID NO: 5:
         (i) SEQUENCE CHARACTERISTICS:
312
313
              (A) LENGTH: 7 amino acids
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              (B) TYPE: amino acid
              (C) STRANDEDNESS:
315
316
              (D) TOPOLOGY: unknown
322
        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
324
         Gln Thr Pro Ala Pro Lys Pro
325
327 (2) INFORMATION FOR SEQ ID NO: 6:
         (i) SEQUENCE CHARACTERISTICS:
329
330 .
              (A) LENGTH: 21 amino acids
331
              (B) TYPE: amino acid
332
              (C) STRANDEDNESS:
333
              (D) TOPOLOGY: unknown
339
        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
         Asp Met Ala Ala Pro Pro Met Pro Pro Gln Pro Pro Arg Ala His Gly
341
342
                                              10
344
         Gln His Tyr Gly His
345
                     20
347 (2) INFORMATION FOR SEQ ID NO: 7:
349
         (i) SEQUENCE CHARACTERISTICS:
350
              (A) LENGTH: 7 amino acids
351
              (B) TYPE: amino acid
352
              (C) STRANDEDNESS:
              (D) TOPOLOGY: unknown
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359
        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
361
         Pro Pro Gln Pro Pro Arq Ala
362
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364 (2) INFORMATION FOR SEQ ID NO: 8:
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369
              (C) STRANDEDNESS:
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              (D) TOPOLOGY: unknown
376
        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
378
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379
                                              10
                         5
381
         Glu Ala Gln Ser Arg Ala Leu Arg Ala Glu Leu Ala Ala Gly Ala Ser
382
                                          25
384
         Gln Ser Arg Arg Pro Arg Pro Pro Arg Gln Arg Asp Ser Ser Thr Ser
385
387
         Gly Asp Asp Ser Gly Arg Asp Ser Gly Gly Pro Arg Arg Arg Gly
388
                                  55
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. VERIFICATION SUMMARY

PATENT APPLICATION: US/09/489,850

DATE: 08/08/2001

TIME: 16:14:05

Input Set : N:\Crf3\RULE60\09489850.txt Output Set: N:\CRF3\08082001\1489850.raw

L:30 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]

L:31 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]

L:1170 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 L:1173 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 L:1176 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23

L:1293 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23

L:1296 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23